Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Emergency Alert System;	)	EB Docket No. 04-296
	)	
Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief	)	
	)	
Randy Gehman Petition for Rulemaking	)	

FIFTH REPORT AND ORDER

Adopted: January 9, 2012 **Released: January 10, 2012**

By the Commission:

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I. INTRODUCTION

1. In this *Fifth Report and Order*, we continue the process the Commission began in 2007 to transform the EAS into a more technologically advanced alerting system by revising our Part 11 Emergency Alert System (EAS) rules to specify the manner in which EAS Participants[1] must be able to receive alert messages formatted in the Common Alerting Protocol (CAP)[2] and by streamlining our Part 11 rules to enhance their effectiveness and clarity. This *Fifth Report and Order* is the second of two orders that implement Part 11 rule changes stemming from the *Third FNPRM* in this docket.[3] The other order, the *Fourth Report and Order*, addressed the single issue of establishing a new deadline of June 30, 2012, for meeting the various CAP-related requirements that this order codifies.[4]

2. Congress established the Commission for the purposes of, among other things, the national defense and the promotion of safety of life and property through the regulation of wire and radio communications networks.[5] For nearly fifty years, the Commission has implemented this mandate by adopting rules that set technical and other requirements to provide the public with an effective national public alert and warning system. In addition to its obligations under section 151 of the Act, the Commission also has rulemaking authority to regulate participation in the EAS under sections 4(i) and (o), 303(r), and 706 of the Act.[6] In developing and implementing these systems, the Commission has

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[1] EAS Participants are the regulated entities that receive and broadcast alerts. These entities are defined in section 11.1(a) of the Commission's rules and include radio and television broadcast stations, cable systems, wireline video systems, wireless cable systems, direct broadcast satellite (DBS) service providers, and digital audio radio service (SDARS) providers. *See* 47 C.F.R. § 11.11(a).

[2] *See* 47 C.F.R. § 11.56. *See infra* paras. 10-11 for a description of CAP.

[3] *See* Review of the Emergency Alert System; Independent Spanish Broadcasters Association, The Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, ET Docket No. 04-296, *Third Further Notice of Proposed Rulemaking*, 26 FCC Rcd 8149 (2011) (*Third FNPRM*).

[4] *See* Review of the Emergency Alert System; Independent Spanish Broadcasters Association, The Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, ET Docket No. 04-296, *Fourth Report and Order*, 26 FCC Rcd 13710 (2011) (*Fourth Report and Order).*

[5] *See* Section 1 of the Communications Act of 1934 (as amended) (the "Act"), 47 U.S.C § 151.

[6] *See* 47 U.S.C. §§ 154(i) and (o), 303(r), 606. For further, detailed discussion of the Commission's authority to regulate emergency alerts and warnings, *see* Review of the Emergency Alert System, EB Docket No. 04-296, *Notice of Proposed Rulemaking*, 19 FCC Rcd. 15775, 15778-15779, paras. 10, 11 (2004); Review of the Emergency Alert System, EB Docket No. 04-296, *First Report and Order and Further Notice of Proposed Rulemaking*, 20 FCC Rcd. 18625, 18627, para. 5 (2005); Review of the Emergency Alert System; Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, EB Docket No. 04-296, *Second Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 13275, 13278, para. 4 (2007); *Third FNPRM*, 26 FCC Rcd. 8149, 8152, para. 3.

worked with federal partners and in coordination with state and local stakeholders. We find that modernizing the EAS to make it capable of processing CAP-formatted alert messages is necessary and consistent with our statutory goals, because a CAP-based EAS will be more flexible and robust than the current system. In this regard, we observe that the rules we adopt today will integrate the EAS with the Federal Emergency Management Agency's (FEMA's) Integrated Public Alert and Warning System (IPAWS). This will allow authorized alert initiators to issue alerts that will be delivered simultaneously by the EAS as well as the Personal Localized Alerting Network (PLAN).[7] A CAP-based EAS will also be compatible with the many state alerting systems that are switching to CAP.[8] The rules we adopt in this order also will allow alert originators and EAS Participants to make fuller use of CAP's capacity to convey textual information by allowing alert initiators to deliver text files that can track the audio portions of a particular alert. Such visual displays of alert information will be significantly more detailed than what has been possible under the legacy EAS. By thus enhancing the accessibility of the EAS, we increase its benefit to the public, particularly to members of the deaf and hard of hearing communities. Accordingly, the rules we adopt today are a significant next step in facilitating the development of a robust and redundant system for distributing vital alert information to all Americans.

II. SUMMARY

3. With this order, we codify in detail the general obligation the Commission adopted in the *Second Report and Order* in this docket to require EAS Participants to be able to receive CAP-formatted messages.[9] This will enable EAS Participants not only to receive CAP-formatted alert messages, but also to redistribute those messages in the legacy EAS format over the current broadcast-based EAS. Specifically, under the rules we adopt today, CAP-formatted EAS alerts: (i) will be converted into and processed in the same way as messages formatted in the EAS Protocol; and (ii) will be used to generate enhanced visual displays for the viewers of the EAS station processing the CAP message. In addition, we are streamlining the Part 11 rules to improve the overall effectiveness of the EAS.[10]

4. We take the following actions:

- As a general matter, we conclude that the scope of the CAP-related obligations addressed in this order must be limited to those necessary to ensure that CAP-formatted alert messages distributed to EAS Participants will be converted into and processed in the same way as messages formatted in the current EAS Protocol.[11]
- We require EAS Participants to be able to convert CAP-formatted EAS messages into messages

[7] *See* 47 C.F.R. § 10.1 *et seq.* PLAN was formally referred to as the Commercial Mobile Alert System (CMAS) in the Commission's rules.

[8] For example, Washington State has a CAP-enabled system in place.

[9] *See* Review of the Emergency Alert System; Independent Spanish Broadcasters Association, The Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, *Second Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 13275 (2007) ("*Second Report and Order*").

[10] In a separate proceeding we adopted an order setting technical parameters for a nationwide test of the EAS. *See* Review of the Emergency Alert System, *Third Report and Order*, 26 FCC Rcd 1460 (2011) (*National Test Order*). The first ever nationwide test of the EAS was subsequently conducted on November 9, 2011. *See Public Safety and Homeland Security Bureau Announces that First Ever Nationwide Diagnostic Test of the Emergency Alert System Will Occur on November 9, 2011 at 2 PM EST*, Public Notice, 26 FCC Rcd 8398 (PSHSB 2011). *See also Public Safety and Homeland Security Bureau Provides Additional Information to EAS Participants for the November 9, 2011 Nationwide Test of the Emergency Alert System*, Public Notice, 26 FCC Rcd 11461 (PSHSB 2011).

[11] *See infra* para. 26.

that comply with the EAS Protocol requirements,[12] following the procedures for such conversion set forth in the EAS-CAP Industry Group's (ECIG's) ECIG Implementation Guide.[13]

- We require EAS Participants to monitor FEMA's IPAWS system for federal CAP-formatted alert messages using whatever interface technology is appropriate.[14]
- We permit, with certain limitations described below, EAS Participants to use intermediary devices to meet their CAP-related obligations.[15]
- We require EAS Participants to use the enhanced text in CAP messages to meet the video display requirements.[16]
- We adopt streamlined procedures for equipment certification that take into account standards and testing procedures adopted by FEMA.[17]
- We eliminate, as unnecessary, the requirement that EAS Participants receive and transmit CAP-formatted messages initiated by state governors.[18]
- We streamline the rules governing the processing of Emergency Action Notifications (EAN) and eliminate as unnecessary several provisions in Part 11, such as the Emergency Action Termination (EAT) event code and the Non-Participating National (NN) status.[19]

5. The CAP-related rules we adopt today will enable EAS Participants and alert initiators to integrate the EAS with other federal, as well as state and local, CAP-based alerting systems across the country, thus making public alerts disseminated through the EAS more effective and informative. Virtually all commenters agree that incorporation of CAP into the Part 11 rules will significantly benefit both public safety officials and the public by creating a more efficient, reliable, and effective EAS. Because the order does not impose new obligations but primarily details the manner in which EAS Participants must implement the CAP requirement, the rules we adopt today will impose minimal new costs, particularly as many EAS Participants have already purchased and installed CAP-compatible EAS equipment.[20] In many cases, the rules will result in decreased costs. For example, by removing redundant or obsolete sections from our EAS rules, we not only streamline EAS operation, but also decrease costs to all involved in the functioning of the EAS. Moreover, the CAP-related amendments that we make to our EAS rules are designed to minimize costs. We are eliminating the obligation to receive and process CAP-formatted alert messages initiated by state governors, in part because we find that a federal mandate to carry such alerts duplicates features offered by the IPAWS and that eliminating the mandate to carry

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[12] *See* 47 C.F.R. § 11.31.

[13] *See infra* para. 36.

[14] *See infra* para. 50.

[15] *See infra* para. 74.

[16] *See infra* paras. 138-140.

[17] *See infra* paras. 165-167, 175-176.

[18] *See infra* para. 191.

[19] *See infra* paras. 194-227.

[20] *See, e.g.*, Sage Alerting Systems, Inc., Comments, EB Docket 04-296 (filed July 20, 2011) at 16 (Sage Comments); Monroe Electronics, Inc., Reply Comments, EB Docket 04-296 (filed July 19, 2011) at 4 (Monroe Reply Comments); The Association of Public Television Stations and the Public Broadcasting Service Comments, EB Docket 04-296 (filed July 20, 2011) at 3-4 (Public Television Comments); The National Association of Broadcasters Comments, EB Docket 04-296 (filed July 20, 2011) at 24-25 (NAB Comments).

gubernatorial alerts will also allow EAS Participants to avoid the costs associated with upgrading EAS equipment to comply with this requirement. In the few instances where the rules we adopt today may result in new costs to EAS Participants, we believe that these costs are more than outweighed by the significant benefits to public safety that a functioning CAP-based EAS will bring to the American public.

III. BACKGROUND

6. The current EAS is a national public warning system that requires broadcasters, cable systems, and other service providers (EAS Participants) to provide communications capabilities that enable the President to address the public in the event of a national emergency.[21] EAS Participants also distribute, on a voluntary basis, alerts issued by state and local governments, as well as the National Weather Service (NWS).[22] Although a national EAS alert has never been issued, EAS Participants deliver well over a thousand alerts issued by state and local governments and the NWS annually, the vast majority of which are weather-related alerts.[23] The Commission, FEMA, and NWS implement the EAS on the federal level.[24] The Commission adopts, administers, and enforces the technical rules for the EAS.[25]

7. The present-day EAS is a hierarchical alert message distribution system in which a message originator at the local, state, or national level formats a message in the EAS Protocol,[26] a format identical to the Specific Area Message Encoding (SAME) digital protocol utilized by NWS for weather

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[21] *See Third FNPRM*, 26 FCC Rcd 8152-53, para. 3. The history of the EAS is summarized in the first Notice of Proposed Rulemaking in this docket. *See* Review of the Emergency Alert System, EB Docket No. 04-296, *Notice of Proposed Rulemaking*, 19 FCC Rcd 15775, 15776-77, paras. 6-8. In addition, an overview of the present organization and functioning of the EAS system is included in the *Second Report and Order*. *See Second Report and Order*, 22 FCC Rcd 13275, 13280-83, paras. 11-14.

[22] *See Third FNPRM*, 26 FCC Rcd 8152-53, para. 3.

[23] Although the Commission does not require EAS Participants to report the number of EAS alerts they receive from the NWS or state agencies, the Partnership for Public Warning, in its EAS Assessments noted that 1,448 alerts were generated in 1990; 1,309 in 1991; and 1,412 in 1992. *See* the "Emergency Alert System (EAS): An Assessment," Partnership for Public Warning, PPW Report 2004-1, February 2004.

[24] The respective roles of the Commission, FEMA, and NWS are defined in a series of Executive documents. *See* 1981 State and Local Emergency Broadcasting System (EBS) Memorandum of Understanding Among the Federal Emergency Management Agency (FEMA), Federal Communications Commission (FCC), the National Oceanic and Atmospheric Administration (NOAA), and the National Industry Advisory Committee (NIAC) *reprinted as* Appendix K to Partnership for Public Warning Report 2004-1, The Emergency Alert System (EAS): An Assessment; Assignment of National Security and Emergency Preparedness Telecommunications Functions, Exec. Order No. 12472, 49 Fed. Reg. 13471 (1984); and *Memorandum,* Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995) (*1995 Presidential Statement*).

[25] *See Third FNPRM*, 26 FCC Rcd 8154, para. 4 (*citing Memorandum,* Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995)). The responsibilities of the Commission and FEMA in administering the EAS are also defined in *Executive Order* 13407. *See* Exec. Order No. 13,407, 71 Fed. Reg. 36975 (June 26, 2006) (*Executive Order* 13407).

[26] *See* 47 C.F.R. § 11.31. Under this protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (which contain information regarding the identity of the sender, the type of emergency, its location, and the valid time period of the alert); (2) audio attention signal; (3) message; and (4) preamble and "end of message" (EOM) codes. *See id.* § 11.31(a). Although the EAS Protocol specifies that the message can be audio, video, or text, in practice, only audio is sent.

alerts (hereinafter, "EAS Protocol" and "SAME" are used interchangeably).[27] At the national level, EAS message distribution starts at Primary Entry Point (PEP) stations, which are designated by FEMA and tasked with receiving and transmitting "Presidential Level" messages initiated by FEMA.[28] The PEP stations broadcast the SAME-formatted alert to the public as well as to "Local Primary" (LP) stations, which monitor designated PEP stations for the national level alert. LP stations, in turn, are monitored by all other EAS Participants.[29] At the state level, state governors and state and local emergency operations managers activate the EAS by utilizing state-designated EAS entry points – specifically, State Primary stations and "State Relay" stations.[30] This process of relaying EAS messages from station to station is often referred to as the "daisy chain."[31]

A. Second Report and Order

8. In 2007, the Commission adopted the *Second Report and Order* in this docket,[32] which revised the Commission's Part 11 EAS rules to lay the foundation for a state-of-the-art, next-generation national EAS (Next Generation EAS). To ensure that the Next Generation EAS would be transmitted in an efficient, rapid, and secure manner over a variety of formats (including text, audio, and video) and via different means (broadcast, cable, satellite, and other networks), the Commission required that EAS Participants: (1) be capable of receiving CAP-formatted alert messages no later than 180 days after FEMA publishes its adoption of the CAP standard;[33] (2) adopt Next Generation EAS delivery systems no later than 180 days after FEMA publicly releases standards for those systems;[34] and (3) transmit state and

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[27] *See Third FNPRM*, 26 FCC Rcd 8154, para. 5 (*citing* NOAA Weather Radio SAME Info, http://www.nws.noaa.gov/nwr/nwrsame.htm; Specific Area Message Encoding (SAME), National Weather Service Instruction 10-1712 (Feb. 12, 2007), *available at* http://www.nws.noaa.gov/directives/010/pd01017012b.pdf).

[28] *See* 47 C.F.R. § 11.2(a). As the entry point for national level EAS messages, PEP stations are designated as "National Primary" (NP) stations. *See id.* §§ 11.2(f), 11.18(a). FEMA has indicated that it intends to increase the number of PEP stations from the original 34 to more than 80 stations, thus expanding coverage of the nation's population from approximately 67 percent (in 2009) to over 90 percent when these additional stations become operational. *See* FEMA, "EAS Modernization and Expansion Project" (Jan. 14, 2011), *available at* https://www.fema.gov/emergency/ipaws/projects.shtm.

[29] At present, the United States is divided into approximately 550 EAS local areas, each of which contains at least two Local Primary stations, designated "Local Primary One" (LP1) and "Local Primary Two" (LP2). The LP stations must monitor at least two EAS sources for Presidential messages (including State Primary stations and in some cases a regional PEP station) and, as specified in Local EAS Plans, coordinate the carriage of emergency messages from sources such as the NWS or local emergency management offices to activate the EAS for localized events such as severe weather alerts. *See, e.g.*, 47 C.F.R. § 11.18(b). All other EAS Participants are designated Participating National (PN) stations and must monitor at least two EAS sources, including an LP1 and an LP2 station as specified in the state's EAS plan. *See* 47 C.F.R. §§ 11.18, 11.52(d).

[30] The State Relay Network is composed of State Relay sources, leased common carrier communications facilities, or any other available communications facilities. In addition to EAS monitoring, state emergency messages may be distributed by satellites, microwave, FM subcarrier, or any other communications technology. *See* 47 C.F.R. § 11.20. State Relay stations relay both national and state emergency messages to local areas. *See* 47 C.F.R. § 11.18(d).

[31] *See Third FNPRM*, 26 FCC Rcd 8155, para. 6. State transmission systems vary from state to state but can include "daisy chain" links between broadcast and other terrestrial communications facilities, as well as satellite-based facilities.

[32] *See Second Report and Order*, *supra* note 9.

[33] *See Second Report and Order*, 22 FCC Rcd 13275, 13288, para. 26.

[34] *See id.* at 13291, para. 32.

local EAS alerts originated by governors or their designees no later than 180 days after FEMA publishes its adoption of the CAP standard,[35] provided that the state has a Commission-approved State EAS Plan that provides for delivery of such alerts.[36] The hallmarks of the Commission's approach in the *Second Report and Order* are described below.

9. *Maintaining the EAS.* For various reasons, including the recognition of the long-standing and important use of the EAS for state, local, and weather–related emergencies, the Commission concluded that EAS Participants should maintain the existing EAS.[37] To enhance flexibility and redundancy in message dissemination, however, the Commission also required that EAS Participants upgrade their networks to the Next Generation EAS while maintaining the existing EAS.[38]

10. *Using Common Alerting Protocol with the EAS.* As explained in the *Second Report and Order*, CAP is an open, interoperable standard, developed within the OASIS standards process,[39] that incorporates a language developed and widely used for web documents.[40] CAP-formatted alerts can include audio, video or data files; images; multilingual translations of alerts; and links providing more detailed information than what is contained in the initial alert (such as streaming audio or video).[41] CAP utilizes standardized fields that facilitate interoperability between and among devices.[42] CAP is also backwards-compatible with SAME to the extent that it can be used to relay SAME data.

11. Although CAP and SAME both convey data, the two protocols function in entirely different ways.[43] CAP essentially represents an envelope into which data is packaged according to

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[35] The Mayor of the District of Columbia, as well as the Governors of the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, American Samoa, and Guam, are also required to have this capability. *See* 47 U.S.C. § 153(58) ("The term 'state' includes the District of Columbia and the Territories and possessions.").

[36] *See Second Report and Order*, 22 FCC Rcd 13300, para. 55.

[37] *See id.* at 13283-84, paras. 17-18.

[38] *See id.* at 13284, para. 18.

[39] OASIS is a not-for-profit, international consortium that drives the development, convergence, and adoption of e-business standards. OASIS – Who We Are, http://www.oasis-open.org/who/. OASIS Common Alerting Protocol Version 1.2 (1 July 2010) (OASIS CAP Standard v1.2) was approved by OASIS on August 12, 2010. *See* Common Alerting Protocol (CAP) 1.2 Receives Approval as OASIS Standard, http://www.oasis-open.org/news/oasis-news-2010-08-12.php. A copy of OASIS CAP Standard v1.2 is available at http://www.oasis-open.org/specs/#capv1.2.

[40] *See* http://www.oasis-emergency.org/cap.

[41] *See Second Report and Order*, 22 FCC Rcd 13275, 13285-88, paras. 22-25. *See also* OASIS Common CAP Standard v1.2, § 3.2.

[42] The CAP standard specifies what fields an alert message can contain and what information can be included in the particular fields, such as message type, scope, incident, and event information. *See* OASIS Common CAP Standard v1.2, § 3.2. As the Commission acknowledged in the *Second Report and Order*, "any EAS initiator can take information from a CAP-based message and translate it into any other standard for distribution over a particular channel, network, or technology," which is particularly relevant to translating a CAP-formatted message into a SAME-formatted message. *Second Report and Order*, 22 FCC Rcd 13275, 13286-87, para. 24.

[43] Unlike CAP, SAME only provides information concerning the originator of the alert, the type of alert (or "event"), the areas affected, the duration of the alert, the time the alert was issued, and the call sign of the EAS Participant that is transmitting or retransmitting the alert. *See* 47 C.F.R. § 11.31. Under the SAME/EAS Protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (containing information regarding the identity of the sender, the type of emergency, its location, and valid time period of the alert); (2) audio attention signal; (3) message; and (4) preamble and EAS end of message codes. *See id.* § 11.31(a).

predetermined fields and packetized for transmission over various IP-based mediums, such as the Internet. The SAME protocol is designed to combine specific codes that identify alert data (*e.g.*, type, origin, and area affected) with an audio message and modulate those onto an RF signal.[44] Thus, for example, CAP conveys an alert's identifying data in separate fields from the audio or video message (which may be provided either as a file or a link to a URL); whereas in a SAME-formatted message, the audio portion of the message is already modulated onto the RF signal along with the EAS codes.[45] Accordingly, when the EAS decoder receives a SAME-formatted message, it also receives whatever audio may be associated with that message. On the other hand, when a CAP-enabled EAS decoder receives a CAP-formatted message, it may play back the audio file or retrieve streaming audio from another source.

12. *Next Generation Distribution System.* While the Commission elected to maintain the existing EAS, it also concluded that it should enhance the distribution architecture of the EAS.[46] Based on the record before it, the Commission acknowledged that it could improve the EAS by authorizing the delivery of alerts through the existing EAS coupled with new redundant distribution systems for EAS, such as satellite.[47] The Commission also concluded, however, that FEMA is best positioned to determine the types of additional EAS systems that EAS Participants should accommodate.[48] Accordingly, the Commission indicated that "should FEMA announce technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite, or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery."[49]

B. Subsequent Procedural History

13. On March 25, 2010, in anticipation of FEMA's adoption of CAP, the Public Safety and Homeland Security Bureau (Bureau) released the *Part 11 Public Notice*, which sought informal comment

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[44] As explained in the *Second Report and Order*, SAME was originally developed to be transmitted via broadcast radio for receipt by relatively simple devices. *See Second Report and Order*, 22 FCC Rcd 13275, 13284-85, para. 20 (*citations omitted*).

[45] Encoding a SAME-formatted message involves modulating the various codes associated with the SAME protocol and an audio message onto an RF signal using the audio frequency-shift keying (AFSK) modulation scheme to open an audio channel in the EAS decoder. Specifically, the EAS decoder is activated by receiving the SAME protocol preamble codes plus header codes, which are repeated three times consecutively at the start of an EAS message transmission. The EAS decoder uses bit-by-bit comparison for error detection to ensure that at least two of the three match. Depending upon the nature of the alert message, this three-time transmission (or "burst") is followed by a two-tone Attention Signal (currently, 8-25 seconds in duration), which functions as an audio alert to listeners and viewers that an emergency message follows. The Attention Signal may be followed by an audio message. At the end of this message, the preamble plus end of message code is transmitted three consecutive times to signal to the EAS decoder that the alert message is terminated and to return to regular programming. *See* 47 C.F.R. § 11.31. When EAS Participants regenerate, or encode, the message they receive for the benefit of downstream monitoring stations, they are only encoding the EAS Codes as AFSK tones (and any embedded audio message).

[46] *See Second Report and Order*, 22 FCC Rcd 13275, 13291, para. 32.

[47] *See id.*

[48] *See id.* (*citing Executive Order 13407*, §§ 2(a)(ii), 3(b)(iii)).

[49] *See id.*

regarding what, if any, Part 11 changes the introduction of CAP might necessitate.[50] Subsequently, on September 30, 2010, FEMA announced that it would adopt certain technical standards and requirements for CAP-formatted EAS alerts, triggering the Commission's 180 day CAP-adoption deadline.[51] FEMA identified three documents as defining the IPAWS "technical standards and requirements for CAP and its implementation": (1) the OASIS CAP Standard v1.2; (2) an IPAWS Specification to the CAP Standard (CAP v1.2 IPAWS USA Profile v1.0); and (3) the EAS-CAP Industry Group's Recommendations for a CAP-EAS Implementation Guide, Version 1.0 (May 17, 2010).[52] Taken together, these documents set forth the standards for distributing a CAP-formatted message through IPAWS to EAS Participants. Shortly thereafter, on October 7, 2010, the Communications Security, Reliability, and Interoperability Council (CSRIC) adopted a final report recommending changes to the Part 11 rules governing EAS Participants' EAS CAP obligations.[53] Responding in part to FEMA's adoption of the CAP standard, the CSRIC also recommended that the Commission delay its CAP adoption deadline, scheduled for March, 2011. On November 18, 2010, the Commission adopted an order that waived the 180-day deadline, extending it to September 30, 2011.[54]

14. On May 25, 2011, we adopted the *Third FNPRM*, in which we sought comment on a wide range of tentative conclusions and proposed revisions to the Part 11 rules that would more fully delineate and integrate into the Part 11 rules the CAP-related mandates adopted in the *Second Report and Order*.[55] The Commission received 30 comments and 12 reply comments in response to the *Third FNPRM*. Subsequently, on November 18, 2010, we adopted the *Fourth Report and Order* in this docket, in which we amended section 11.56 of our EAS rules to require EAS Participants to be able to receive CAP-formatted EAS alerts no later than June 30, 2012.[56]

IV. DISCUSSION

15. In this *Fifth Report and Order*, we adopt several changes to the Part 11 rules in response to issues and comments raised in the *Third FNPRM*. The rule revisions we adopt today also streamline Part 11 by eliminating several outdated, confusing, or unnecessary requirements in keeping with the Commission's broader effort to eliminate outdated and unnecessary regulations. The specific revisions to the Part 11 rules are included in Appendix A.

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[50] *See* Public Safety and Homeland Security Bureau Seeks Informal Comment Regarding Revisions to the FCC's Part 11 Rules Governing the Emergency Alert System Pending Adoption of the Common Alerting Protocol by the Federal Emergency Management Agency, *Public Notice*, 25 FCC Rcd 2845 (2010) (*Part 11 Public Notice*).

[51] *See* FEMA, "FEMA Announces Adoption of New Standard for Emergency Alerts," Release Number: HQ-10-192 (rel. Sept. 30, 2010), *available at* http://www.fema.gov/news/newsrelease.fema?id=52880.

[52] *See id.*

[53] *See Third FNPRM*, 26 FCC Rcd 8149, 8160, para. 17 (*citing* CSRIC, Working Group 5A, CAP Introduction, Final Report, *available at* http://www.fcc.gov/pshs/docs/csric/CSRIC%205A%20Working%20Group.pdf) (*CSRIC Final Report*)). As explained in the *Third FNPRM*, CSRIC was chartered by the Commission, pursuant to the Federal Advisory Committee Act, 5 U.S.C. Appendix 2, to provide recommendations to the Commission to ensure optimal security, reliability, operability, and interoperability of communications systems, including public safety, telecommunications, and media communications systems. *See id.* at 8159-60, para. 16.

[54] *See* Review of the Emergency Alert System, Order, 25 FCC Rcd 16376, para. 1 (2010) (*Waiver Order*).

[55] *See supra* note 3.

[56] *See Fourth Report and Order*, 26 FCC Rcd 13710, 13710-11, para. 1.

A. Scope of CAP-Related Part 11 Revisions

16. As we explained in the *Third FNPRM*, when the Commission initially adopted the CAP obligations in the *Second Report and Order*, it concluded that EAS Participants should maintain the existing legacy EAS, including use of the SAME protocol, because, among other reasons, alternative and more robust delivery mechanisms had not been developed or deployed.[57] Recognizing that the "daisy-chain" message distribution process used by the legacy EAS lacks the flexibility and redundancy of evolving digital communications systems, the Commission required that EAS Participants deploy equipment capable of receiving CAP messages[58] and upgrade their networks to Next Generation EAS as FEMA adopts standards governing Next Generation EAS distribution systems.[59] Accordingly, the Commission implemented CAP as a parallel mechanism of formatting and distributing alerts to the legacy system that would be converted into and processed within the existing EAS system as legacy SAME-formatted alerts. This approach would facilitate a CAP-based Next Generation EAS to be deployed and operated, at least initially, in parallel to the legacy EAS.

17. In the *Third FNPRM*, we explained that while the SAME protocol used by the legacy EAS is more limited than CAP with respect to its flexibility and the information it can convey,[60] the many benefits of maintaining the legacy EAS previously outlined by the Commission in the *Second Report and Order* continued to be relevant.[61] We observed that FEMA has determined that the legacy EAS would continue to operate as it always had but would also serve as a distribution outlet for IPAWS.[62] Finally, we explained that FEMA has adopted the standards necessary for formatting alert messages into CAP and translating CAP-formatted messages into SAME-compliant messages; thus, the groundwork for implementing CAP-formatted alert initiation within the existing EAS system was already in place.[63]

18. Based on the foregoing, we tentatively concluded in the *Third FNPRM* that, for the time being, we should continue the approach adopted by the Commission in the *Second Report and Order* and maintain the existing legacy EAS, including utilization of the SAME protocol.[64] We clarified that under this transitional approach, the CAP-related changes to Part 11 under consideration in the *Third FNPRM* were designed to permit EAS Participants to receive and process CAP-formatted messages, but subject to the technical requirements and limitations of the existing EAS (*i.e.*, the CAP-formatted message would be converted into and broadcast – and to the extent feasible, encoded [*i.e.*, regenerated] for the benefit of downstream monitoring stations – in the SAME format).[65]

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[57] *See Third FNPRM*, 26 FCC Rcd 8149, 8162, para. 24 (*citing Second Report and Order* at 13283-84, paras. 17-18).

[58] *See id.* (*citing Second Report and Order* at 13288, para. 26).

[59] *See id.* (*citing Second Report and Order* at 13283-84, paras. 17-18, 13291, para. 32).

[60] *See id.* at 8163-64, para. 27 (*citing, e.g., Second Report and Order* at 13284-85, para. 20).

[61] *See id.* (*citing Second Report and Order* at 13283-84, paras. 17-18).

[62] *See id.*

[63] *See id.* (*citing* FEMA, "FEMA Announces Adoption Of New Standard For Emergency Alerts," *available at* http://www.fema.gov/news/newsrelease.fema?id=52880).

[64] *See id.* at 8164, para. 28.

[65] *See id.*

19. We sought comment generally on our tentative conclusion to pursue this approach.[66] We asked, for example, whether the deficiencies of SAME relative to CAP previously identified in the record are significant enough to outweigh the benefits of retaining the legacy EAS system until such time as it can be replaced by the Next Generation EAS system, how long it might take to switch to a CAP-centric EAS system, what such a CAP-centric approach might entail, and how it might affect EAS Participants.[67] We also sought comment on the relative costs and benefits associated with a CAP-centric EAS system and how best to tailor any requirements we might consider to impose the least amount of burden on those affected by the transition to a CAP-centric system.[68]

20. The majority of commenters responding to this issue generally supported our proposed transitional approach. The National Association of Broadcasters (NAB), for example, supported the transitional approach for the reasons outlined in the *Third FNPRM*,[69] adding that "there is definite value in retaining the current 'daisy-chain' EAS distribution system as a proven, redundant method of delivering public alerts."[70] The Named State Broadcasters Associations (NSBA) also agreed, noting that "it makes little sense for the FCC to adopt sweeping Next Generation EAS rule changes at this time when legacy EAS, as governed by the Commission's current Part 11 Rules, is going to be around for the foreseeable future."[71] NSBA also stated that "[t]his approach will provide much needed relief to smaller EAS Participants in particular, and the State Associations therefore support the Commission's transitional proposal to defer a comprehensive revision of its Part 11 rules until its upcoming Notice of Inquiry on Broadband Alerting, at the earliest."[72]

21. Monroe Electronics, Inc. (Monroe), an EAS equipment manufacturer, concurred: "The existing legacy EAS can serve a useful role as a backup to the next generational CAP capability, thereby enhancing a robust, redundant, reliable warning system."[73] In this regard, Monroe observed that "[i]n most natural disasters the broadcast medium is the last system standing and is unparalleled in the 'one to many' message distribution."[74] Monroe also observed, "While the use of the legacy EAS does not provide the value-added content of CAP – including expanded warning text, as well as potentially other multimedia like graphics – it does in itself still convey the basic alert message content."[75] However, Monroe cautioned against limiting broadcasts of alerts to the SAME requirements, recommending instead that we "adopt rules that allow EAS participants an option of broadcasting the expanded text, audio and multimedia that may be contained in CAP formatted alerts."[76]

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[66] *See id.*, para. 29.

[67] *See id.*

[68] *See id.*

[69] *See* NAB Comments at 7.

[70] *Id.* at 7 (*internal footnote omitted*).

[71] Named State Broadcasters Associations Comments, EB Docket 04-296 (filed July 20, 2011) at 9 (NSBA Comments).

[72] NSBA Comments at 9.

[73] Monroe Electronics, Inc., Comments, EB Docket 04-296 (filed July 19, 2011) at 3 (Monroe Comments).

[74] *Id.*

[75] *Id.*

[76] *Id.*

22. Sage Alerting Systems, Inc. (Sage) agreed that "for the next few years at least, CAP messages sent on broadcast outlets and other traditional EAS participants should be viewed in the EAS context."[77] Sage explained, "The slow signaling rate imposed by the SAME protocol does not allow the sending of any of the additional CAP-based information, such as description or instruction," and therefore, "a CAP message will always contain more information than can be transmitted in the data of an EAS message."[78] Sage also observed that "more than half of the EAS participants have already updated their equipment to handle the reception of CAP messages that are then sent on the air as EAS messages," thus "making it harder to jump to something completely different."[79] Sage noted, however, that "[w]hat is seen and heard by the public is . . . not limited by a combined CAP/EAS system as long as those EAS participants who have direct access to the CAP information can make use of that information – the entire system must not be limited by its lowest common denominator fallback in day to day normal operation."[80] In this regard, Sage observed, for example, that "if extended text is available to be placed in a video crawl, or on HD radio data services, or via RDS, an EAS Participant should be permitted (or required) to use that information."[81]

23. Some parties supported our proposed approach, but with reservations. The Broadcast Warning Working Group (BWWG), for example, maintained that "preserving legacy EAS SAME capability has to be a very short-term solution."[82] BWWG advocated deployment of a resilient and redundant CAP-enhanced EAS relay system, composed of wired and multipoint wireless distribution mechanisms so that "local warning centers can distribute CAP and 'Classic EAS' messages directly - with a minimum of [Local Primary station] or other distribution intervention - to as many cable, satellite entities, and TV and radio station entry points as possible."[83]

24. The Rehabilitation Engineering Research Center on Telecommunications Access and the National Association of the Deaf (collectively, the RERC-TA) acknowledged that "the expectation of passing on CAP messages may be unrealistic, due to the costs and effort involved in transitioning the widely deployed legacy EAS to CAP, and the lack of a mechanism for transmitting CAP-formatted messages over the air, in contrast to SAME."[84] The RERC-TA indicated its concern, however, that "the proposed rules allowing EAS participants to meet their CAP-related obligations via converting CAP-formatted messages into SAME-formatted messages will perpetuate the current state of limited accessibility to the EAS by people with disabilities."[85] The RERC-TA asserted, "It needs to be made clear that the conversion of CAP to SAME is only a stopgap measure, and that a fully CAP-capable alerting network needs to be built from the ground up in parallel."[86] In this regard, the RERC-TA supported imposition of a sunset date "on broadcasting SAME-formatted messages as an effective

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[77] Sage Comments at 4.

[78] *Id.*

[79] *Id.* at 5.

[80] *Id.*

[81] *Id.* at 4 (*internal footnote omitted*).

[82] The Broadcast Warning Working Group Comments, EB Docket 04-296 (filed July 19, 2011) at 2 (BWWG Comments).

[83] *Id.* at 13.

[84] The Rehabilitation Engineering Research Center on Telecommunications Access and the National Association of the Deaf Comments, EB Docket 04-296 (filed July 20, 2011) at 3 (RERC-TA Comments).

[85] *Id.*

[86] *Id.*

mechanism to force the transition [to a CAP-centric alerting network] and to ensure that people with hearing-related disabilities are not left behind."[87]

25. One commenter, Verizon, suggested that Local Primary sources should be required to "pass on CAP to downstream participants and convert CAP alerts to SAME and hand off to downstream video distributors in SAME format," although it did not state how the Local Primary sources would "pass" such CAP alerts to downstream EAS Participants.[88]

26. *Decision*. We adopt the transitional approach set forth in the *Third FNPRM*. Specifically, we will continue the approach adopted by the Commission in the *Second Report and Order* and maintain the existing legacy EAS, including utilization of the SAME protocol. Under this transitional approach, the CAP-related changes to Part 11 we adopt in this order are limited to ensuring that EAS Participants' EAS equipment will be capable of receiving and converting CAP-formatted messages into a SAME-compliant message.[89] To be clear, EAS Participant stations that are generally charged with encoding (*i.e.*, regenerating) the EAS Protocol codes (as AFSK tones) for the benefit of downstream stations monitoring their transmissions will continue that function with respect to alert messages they receive in the CAP format – just as they would for alert messages they receive in the SAME format. However, they will be generating the AFSK tones based upon the relevant EAS Protocol codes contained within the CAP message, in conformance with the ECIG Implementation Guide, including the audio message contained in the CAP message, to the extent required under our rules.

27. As explained in the *Third FNPRM*, we find that this transitional approach is warranted, primarily because switching over to a fully CAP-centric EAS system – where EAS messages are inputted and outputted in CAP format rather than SAME format – at this time is both technically infeasible and premature, because no such CAP-centric system has been developed. The transitional approach also makes sense because the many benefits of maintaining the legacy EAS previously outlined by the Commission in the *Second Report and Order* continue to be relevant today.[90] For example, in emergencies that result in outages of power, cellular telephone service, or Internet connectivity, IP-based services like CAP-based alerting systems may not be available, and the broadcast-based legacy EAS may be the only reliable means of disseminating emergency alerts to the public, because messages can be received on battery-powered radios and televisions.[91] Furthermore, as discussed in the *Third FNPRM*, FEMA has indicated that the legacy EAS will continue to provide a nationwide alerting mechanism as part of its IPAWS system.[92] FEMA's adoption of the standards necessary for formatting alert messages into CAP and translating such CAP-formatted messages into SAME-compliant messages sets the groundwork for implementing CAP-formatted alert initiation within the existing EAS system.[93] In addition, the record indicates that EAS equipment manufacturers have designed and have been marketing

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[87] *Id.* (*internal footnote omitted*).

[88] Verizon Comments, EB Docket 04-296 (filed July 20, 2011) at 5 (Verizon Comments).

[89] As detailed in section IV.B(1) of this order, we are requiring such conversion to be made in conformance with the ECIG Implementation Guide. *See infra* para. 36.

[90] *See Third FNPRM*, 26 FCC Rcd 8163-64, para. 27 (*citing Second Report and Order* at 13283-84, paras. 17-18).

[91] *See Second Report and Order* at 13283, para. 17 (observing that dissemination of emergency alerts via the EAS to battery-powered AM or FM receivers may be the primary source of emergency information for the general public, and that broadcast and cable personnel already are familiar with current EAS equipment and are trained in its use).

[92] *See Third FNPRM*, 26 FCC Rcd 8163-64, para. 27.

[93] *See id.* Also, the NWS has indicated that it plans to integrate CAP v1.2 alerting through IPAWS in the fourth quarter of 2011. *See* National Weather Service, Public Information Statement, NOUS41 KWBC 221803, (June 22, 2011) at: http://www.nws.noaa.gov/om/notification/pns11cap_wiki.htm.

CAP-enabled equipment that conforms to these FEMA-adopted standards, and a significant percentage of EAS Participants already have procured or contracted for such equipment.[94] Accordingly, it is both practical and cost-efficient for us to adopt this transitional approach.

28. We also observe that the transitional approach to phasing in CAP capabilities – and the rule revisions we adopt in this order to facilitate that approach – will not impose or amplify costs for regulatees, as the obligation to receive CAP messages was adopted in the 2007 *Second Report and Order*. Moreover, the transitional approach will provide substantial benefits in the form of making the EAS more efficient, reliable and informative, improvements that may save lives, protect health, and preserve property.

29. While we appreciate the BWWG's suggestions regarding establishment of wired and wireless local relay networks or other means of distributing CAP messages to enhance the redundancies, robustness, and effectiveness of CAP alerting, such changes to the architecture of the EAS are beyond the scope of this proceeding.[95] We reject RERC-TA's suggestion that we impose a sunset date for the legacy EAS.[96] This suggestion is inconsistent with FEMA's stated plan to retain the legacy EAS as a central element of the IPAWS. Finally, with respect to Verizon's suggestion to require Local Primary stations to "pass on CAP to downstream participants," such a request is beyond the scope of this proceeding, which is limited to simply ensuring that CAP messages are received, converted into, and processed as SAME-compliant messages by EAS Participants.

30. As detailed in section IV.B(1) of this order, while our transitional approach to implementing CAP requires conversion of CAP-formatted messages into SAME-compliant messages, we are also persuaded by the many commenters that advocated for allowing EAS Participants to make fuller use of CAP's capabilities to convey information. We agree that the CAP-in, SAME-out transitional approach we adopt here should not be so rigid as to preclude the benefits of CAP's capacity to convey information. To the extent it is technically feasible to make use of this capacity within the existing EAS architecture, such action would inherently enhance public safety and serve the public interest. Accordingly, we are requiring EAS Participants to create video crawls based upon the enhanced text contained within the CAP message to the extent that such text files are provided by the alert initiator, in conformance with the procedures set forth in the ECIG Implementation Guide. We believe that requiring use of this enhanced CAP functionality will make a significant advance in providing more informative alerts for all Americans and, in particular, members of the deaf and hard of hearing communities.[97]

B. Obligation to Accept CAP Messages

1. CAP-Formatted Message Conversion to SAME

31. As we explained in the *Third FNPRM*, the EAS-CAP Industry Group (ECIG)[98] developed

[94] *See, e.g.*, Sage comments at 5, 7; Monroe Comments at 17; Monroe Reply Comments at 4.

[95] *See* BWWG Comments at 13-15.

[96] *See* RERC-TA Comments at 3.

[97] The Commission is concurrently implementing the Twenty-first Century Communications and Video Accessibility Act of 2010 (CVAA), which requires, among other things, that televised emergency information is accessible to individuals who are blind or visually impaired. *See* Pub. L. No. 111-260 and Pub. L. No. 111-265 (technical amendments to the CVAA).

[98] The EAS-CAP Industry Group "is a coalition of Emergency Alert System equipment, software and service providers, with current voting members including: Alerting Solutions, Inc.; Communications Laboratories, Inc.; iBiquity Digital Corporation; Monroe Electronics, Inc.; MyStateUSA; Sage Alerting Systems, Inc.; SpectraRep, LLC; TFT, Inc.; Trilithic, Inc. and Warning Systems, Inc." EAS-CAP Industry Group, Board of Directors, (continued....)

the ECIG Implementation Guide to ensure consistency across all devices and delivery platforms in how EAS Participants decode messages formatted pursuant to OASIS CAP Standard v1.2 and CAP v1.2 IPAWS USA Profile v1.0 and present them to the public.[99] This guide outlines how to convert CAP-formatted messages into SAME-compliant messages.[100] FEMA announced its adoption of the ECIG Implementation Guide on September 30, 2010.[101]

32. In the *Third FNPRM*, we tentatively concluded that, for the purpose of ensuring greater uniformity in the output of devices subject to Part 11, we should amend section 11.56 to require EAS Participants to convert CAP-formatted EAS messages into SAME-compliant EAS messages in accordance with the ECIG Implementation Guide.[102] We observed that adopting the ECIG Implementation Guide as the standard for translating CAP-formatted messages into SAME-compliant messages should harmonize CAP elements with the Part 11 rules.[103] We further observed that such action would ensure that CAP-formatted EAS messages are converted into SAME-compliant messages in a consistent manner across devices and delivery platforms.[104] We sought comment in the *Third FNPRM* on whether our revision of the Part 11 rules should include a standardized method of decoding and translating CAP-formatted messages into SAME-compliant messages to ensure consistency across devices and delivery platforms in how EAS Participants present these messages to the public.[105] We also asked whether it is enough to specify in section 11.56 that EAS equipment must be capable of outputting CAP-formatted messages in EAS protocol-compliant form.[106]

33. Every commenter responding to this issue generally supported our tentative conclusion to amend section 11.56 to require EAS Participants to convert CAP-formatted EAS messages into SAME-compliant EAS messages in accordance with the ECIG Implementation Guide. Sage, for example, in support of the ECIG Implementation Guide, observed that "[a]dherence to a command standard and methodology for rendering a CAP message into EAS is necessary to maintain the integrity of the EAS system, for message validity, and for detection of duplicate messages."[107]

34. NAB stated, "This approach will greatly facilitate the Commission's goals during the transition period before full introduction of Next Generation EAS, when EAS Participants need only accept and translate CAP messages into the legacy EAS Protocol," adding that "[the approach] is also consistent with previous instances when the Commission has relied on industry-sponsored standards-

(Continued from previous page)
Comments, EB Docket 04-296 (filed May 17, 2010) at 1-2. *See also* ECIG's web site at http://eas-cap.org/members.htm.

[99] *See Third FNPRM*, 26 FCC Rcd 8165-66, para. 33.

[100] *See* ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0 (May 17, 2010), EB Docket 04-296 (filed May 17, 2010) (the "ECIG Implementation Guide") (this document is also available on ECIG's web site at: http://eas-cap.org/documents.htm).

[101] *See supra* para. 13.

[102] *See Third FNPRM*, 26 FCC Rcd 8166, para. 35.

[103] *See id.*

[104] *See id.*

[105] *See id.*

[106] *See id.*

[107] Sage Comments at 6. *See also*, Trilithic Trilithic Inc. Comments, EB Docket 04-296 (filed July 20, 2011) at 5 (Trilithic Comments).

setting work, such as for the digital television transition and HD Radio."[108] NAB observed, however, that "EAS Participants . . . are not in a position to either (1) examine or (2) verify that their equipment is ECIG-compliant [but] must instead rely on the expertise and representations of manufacturers."[109] Accordingly, NAB argued that "ensuring compliance with the ECIG Guide should rest with the equipment manufacturers, as part of their obligation to pass [equipment certification], and any revised rules should be crafted to reflect this approach."[110]

35. The National Cable & Telecommunications Association (NCTA) "generally supported" our approach but raised concerns that the ECIG Implementation Guide "does not have the backing of an accredited standards organization."[111] NCTA asked, for example, "What happens . . . if there are changes to the CAP protocol[, and] [w]hat is the process for amending the ECIG Implementation Guide going forward?"[112] According to NCTA, "The only way to ensure that stakeholders have a say in EAS-CAP operation once it is codified in the rules is to manage the document through an ANSI accredited standards development organization."[113]

36. *Decision*. We adopt our tentative conclusion in the *Third FNPRM* to amend section 11.56 to require EAS Participants to convert CAP-formatted EAS messages into SAME-compliant EAS messages in accordance with the ECIG Implementation Guide,[114] except for its provisions on text-to-speech (described below) and gubernatorial CAP messages.[115] As we observed in the *Third FNPRM*, adopting the ECIG Implementation Guide as the standard for translating CAP-formatted messages into SAME-compliant messages will harmonize CAP elements with the Part 11 rules, thus ensuring that CAP-formatted EAS messages are converted into SAME-compliant messages in a consistent, cost-efficient manner across devices and delivery platforms.[116] Adoption of this requirement has broad support in the record.[117]

37. As indicated above, FEMA has adopted the ECIG Implementation Guide as its benchmark for processing IPAWS-distributed CAP-formatted messages to the EAS. As detailed below in section IV.C of this order, many manufacturers have already designed EAS equipment that conforms to the ECIG Implementation Guide, as demonstrated by their having completed the requirements of FEMA's IPAWS Conformity Assessment Program. As further detailed below in section IV.C of this order, EAS equipment manufacturers may use the Suppliers Declarations of Conformity issued to them upon their

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[108] NAB Comments at 10.

[109] *Id.* at 11.

[110] *Id.* at 11.

[111] National Cable & Telecommunications Association Comments, EB Docket 04-296 (filed July 20, 2011) at 11 (NCTA Comments).

[112] *Id.*

[113] *Id.* at 12.

[114] *See Third FNPRM*, 26 FCC Rcd 8149, 8166, para. 35.

[115] Because, as detailed in section IV.D of this order, we are eliminating the mandate to process CAP-formatted messages initiated by state governors, the issue of conformance with the provisions in the ECIG Implementation Guide to effect that mandate are moot. *See, e.g.*, ECIG Implementation Guide, §§ 3.4.5.7, 3.7, 6.7.

[116] *See id.*

[117] *See, e.g.* Sage Comments at 6; Trilithic Comments at 5; BWWG Comments at 18; Monroe Comments at 4; TFT, Inc., Comments, EB Docket 04-296 (filed July 20, 2011) at 3 (TFT Comments); Gary E. Timm Comments, EB Docket 04-296 (filed July 20, 2011) at 1-2 (Timm Comments).

successful completion of FEMA's IPAWS Conformity Assessment Program to support their application for FCC certification. We find that the costs of complying with the ECIG Implementation Guide are minimal, because all new CAP-capable equipment already complies with the ECIG Implementation Guide's requirements. Thus, we adopt a streamlined mechanism by which EAS equipment manufacturers may support their FCC certification applications, which will eliminate uncertainty and the unnecessary costs that would accompany a requirement that EAS equipment manufacturers demonstrate CAP-to-SAME conversion on a piecemeal basis.

38. One area where we deviate from the ECIG Implementation Guide, however, is its provisions on text-to-speech.[118] The ECIG Implementation Guide procedures for constructing the audio from a CAP message require that "[i]f attached EAS audio is not present, and the EAS device supports text-to-speech technology, then text-to-speech audio SHALL be rendered . . . and used as the audio portion of the EAS alert."[119] Although use of text-to-speech technology has some support in the record,[120] there are also concerns in the record about whether text-to-speech software is sufficiently accurate and reliable to deliver consistently accurate and timely alerts to the public.[121] Allowing the text-to-speech conversion to be resolved by EAS equipment software, as opposed to text-to-speech software that the alert message originator might employ, could result in differing audio messages being broadcast for the same EAS message, depending upon which software brand and version a given equipment manufacturer elected to incorporate into its EAS equipment. As indicated in the *Third FNRPM*, we continue to believe that discussion of text-to-speech and speech-to-text software is best reserved for a separate proceeding, and we therefore defer these issues at this time.[122]

39. With respect to NAB's contention that the Part 11 rules should be clarified to make equipment manufacturers solely responsible for compliance with the ECIG Implementation Guide as part of the equipment certification process, we do not believe such action is necessary because manufacturers already are prohibited from marketing non-compliant equipment. Specifically, section

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[118] While we do not permit the construction of EAS audio from a CAP text message at this time, we encourage CAP alert message originators to provide both audio and text in their CAP messages to ensure accuracy, consistency, and accessibility, whether they use text-to-speech devices or other means to generate the audio portion of the CAP messages they distribute to the EAS. *See also infra* para. 265, noting that CAP-based alert systems enable message originators to include transcripts of the audio portions of their messages, which should encourage state and local alert message originators to craft messages that will provide accessible messaging for persons with hearing or vision disabilities.

[119] ECIG Implementation Guide, § 3.5.1. The ECIG Implementation Guide does not support speech-to-text conversion.

[120] *See, e.g.*, Sage Comments at 3 (recommending "use [of] the CAP text in the crawl, and use [of] Text to Speech based on that crawl if audio is not available for the alert"); BWWG Comments at 2 ("Radio EAS should use text-to-speech converters that can automatically convey vital CAP details aurally").

[121] *See, e.g.*, Sage Comments at 23 (contending that "[i]f the originator provides only text, today's technology allows for text to speech of sufficient quality to produce audio that matches the text," but adding the caveat that "[t]here are limitations with text to speech, primarily in the pronunciation of local area names. There is also a wide variation in the text to speech engines used by various manufacturers. While the level of intelligibility is nearly the same, the rendered audio is very different from each. Some jurisdictions will solve this problem by using a Text to Speech engine at the CAP origination point, or at the CAP server. While the audio is still machine generated, every EAS participant gets the same audio").

[122] *See Third FNPRM*, 26 FCC Rcd 8149, 8219-20, para. 195. For example, the use of text-to-speech software may be discussed further in proceedings to implement the Twenty-first Century Communications and Video Accessibility Act of 2010 (CVAA), which requires televised emergency information to be accessible to individuals who are blind or visually impaired. *See* Pub. L. No. 111-260 and Pub. L. No. 111-265 (technical amendments to the CVAA).

11.34 of the Commission's rules requires that the data submitted for certification of encoders and decoders "show the capability of the equipment to meet the requirements of [Part 11]."[123] This data necessarily includes compliance with the ECIG Implementation Guide, conformance with which we are mandating in section 11.56. Further, section 2.803 generally prohibits the marketing of equipment subject to certification that has not obtained such certification.[124] We also decline to make explicit in the rules that EAS Participants are not responsible for ensuring compliance with the ECIG Implementation Guide. First, all of the obligations in Part 11 are directed at EAS Participants. Second, because EAS equipment manufacturers are prohibited from marketing non-compliant equipment, it is highly unlikely that they would sell EAS Participants non-compliant equipment. Third, once the equipment manufacturer markets the compliant equipment, it has limited or no control over how the purchaser might operate, reprogram, or otherwise alter it.

40. With respect to NCTA's concerns regarding the ECIG Implementation Guide not being developed through an accredited standards development organization, we observe that the ECIG Implementation Guide was developed in a forum composed of a broad coalition of EAS equipment, software, and service providers.[125] As a general matter, we agree that the ECIG Implementation Guide should be managed in a transparent manner that affords all stakeholders an opportunity to meaningfully participate in its further development, such as open voting membership status for any interested party and procedures for amending the ECIG Implementation Guide moving forward. We encourage ECIG to review, and if necessary amend, its internal processes, bylaws, or other administrative governance documents to ensure that transparent participation for all interested parties is effectively institutionalized.[126] We will revisit this issue if it becomes a problem in the future.

2. CAP-Related Monitoring Requirements

41. Section 11.52 sets forth the basic monitoring requirements that EAS Participants must follow to facilitate receipt of EAS alert messages.[127] This section requires EAS Participants to monitor two EAS sources, which are assigned in the State EAS Plan.[128] In the *Third FNPRM*, we observed that, although the *Second Report and Order* codified in section 11.56 the general obligation of EAS Participants to receive CAP-formatted EAS alerts, it did not specify any associated monitoring requirements.[129]

42. As we explained in the *Third FNPRM*, the technical construction and distribution methodologies of CAP messages are different from SAME messages.[130] Specifically, under the current EAS technical framework, SAME-formatted messages are AFSK-modulated data messages that are received by monitoring the over-the-air broadcasts of designated broadcast stations.[131] By contrast, CAP

[123] *See* 47 C.F.R. § 11.34.

[124] *See* 47 C.F.R. § 2.803.

[125] *See, e.g.*, ECIG's web site at http://eas-cap.org/members.htm.

[126] The ECIG Bylaws are available for downloading or viewing at: http://eas-cap.org/files/ECIG%20Bylaws%202009.pdf.

[127] *See* 47 C.F.R. § 11.52.

[128] *See id.* § 11.52(d).

[129] *See Third FNPRM*, 26 FCC Rcd 8149, 8166-67, para. 36 (*citing Second Report and Order*, 22 FCC Rcd 13275, 13288, para. 26).

[130] *See id.* at 8167-68, para. 38.

[131] *See* 47 C.F.R. § 11.31(a).

messages are IP-based data packets that can be distributed using various distribution models.[132] We noted in the *Third FNPRM* that FEMA had indicated that the IPAWS system would employ Really Simple Syndication (version 2.0) (RSS) to distribute CAP-formatted alerts to EAS Participants.[133] Based upon that representation, we tentatively concluded that we should amend section 11.52 to include a requirement that EAS Participants monitor FEMA's IPAWS RSS feed(s) for federal CAP-formatted messages.[134] We sought comment generally on this tentative conclusion and posed several questions directed at whether our proposed approach was sufficient to both ensure that EAS Participants receive federal CAP-formatted messages and capture the technical elements of monitoring.[135] We also sought comment on the costs and benefits of such an approach and whether there were alternative approaches that would be less burdensome to equipment manufacturers or EAS Participants that would achieve the same result.[136]

43. We also proposed in the *Third FNPRM* that EAS equipment only be required to use the same monitoring functionality for state CAP messages that would be required for federal CAP messages.[137] Accordingly, we tentatively concluded that we should amend section 11.52 to include a requirement that EAS Participants monitor the RSS feed(s) designated by a state as the source of any CAP alerts initiated by its governor (and identified as such in the state's EAS Plan submitted to and approved by the Commission).[138]

44. There was broad opposition to our tentative conclusion that we should require RSS-based monitoring for federal CAP messages, based largely on grounds that technical configurations for monitoring IPAWS and Internet sources are constantly evolving and thus cannot be tied to a static rule. Recent events support this argument. Subsequent to adoption of the *Third FNPRM*, FEMA switched from RSS-based CAP feeds to the Atom Syndication Format (ATOM) for CAP feeds. Although ATOM functions similarly to RSS, it is a different application and thus inconsistent with our proposed rules.[139]

45. Monroe urged that we "maintain a neutral stance as to specific technical solutions that may have been adopted, or are being considered, by Federal, State and local jurisdictions."[140] In particular, Monroe stated that the Commission "should issue guidelines and principles where feasible in lieu of detailed regulations that inadvertently could pose a risk of freezing technological innovation."[141] According to Monroe, "it is impractical and unrealistic for the Commission to attempt to design, for the

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[132] *See Third FNPRM*, 26 FCC Rcd 8167-68, para. 38.

[133] *See id.* (*citing* http://www.fema.gov/emergency/ipaws/CAP_Feed.shtm).

[134] *See id.*

[135] *See id.* at 8168, para. 39.

[136] *See id.*

[137] *See id.* at 8192-93, para. 116.

[138] *See id.* at 8168-69, para. 40.

[139] Atom Syndication Format is the name of an XML-based Web content and metadata syndication format and includes the Atom Publishing Protocol, an application-level protocol for publishing and editing Web resources. *See, e.g.*, Atom Enabled Alliance, "Atom Publishing Protocol – Introduction," available at: http://www.atomenabled.org/developers/protocol. *See also* Atom Enabled Alliance, "The Atom Syndication Format," available at: http://www.atomenabled.org/developers/syndication/atom-format-spec.php; Atom Enabled Alliance, "The Atom Syndication Format," available at: http://www.atomenabled.org/developers/protocol/atom-protocol-spec.php.

[140] Monroe Comments at 6.

[141] *Id.*

first time, a[] next generation IP based CAP EAS network by codifying various specific design parameters, which may not keep pace with technological innovation, and may in fact be in conflict with system and network design choices already made by a substantial number of state governments around the United States."[142] Monroe also observed that our tentative conclusion to mandate RSS feeds for federal CAP monitoring "may already be [in]consistent with FEMA's IPAWS own decision to deploy an ATOM web feed, rather than RSS 2.0."[143] According to Monroe, our tentative conclusion to require that EAS Participants monitor state RSS sources for CAP alerts initiated by the state's governor was "an implicit requirement for state and local authorities to redesign or recontract their existing CAP-based systems, which in a substantial number of cases includes combinations of satellite and Internet-based distribution."[144]

46. Sage contended that "the FCC should not over-specify exactly how each station will receive CAP messages."[145] With respect to message distribution mediums, Sage observed that "[t]here are a variety of alternate means that are now, or will soon be, in place," adding that "[o]ne way satellite delivery using traditional IP services, a data stream carried as part of digital TV signals from a satellite or terrestrial broadcaster, a state provided RF data channel, or a state-provided proxy server are current examples of running or proposed systems."[146] Sage also stated that "the protocol used to transport CAP messages should not be carved in stone," observing in this regard that "[w]hile RSS, as suggested in the FNPRM in several places is a possible solution, and has been discussed in the past, the current proposed FEMA design is to use ATOM."[147] Sage also opposed setting monitoring requirements for gubernatorial CAP messages, observing, among other things, that "[s]everal states already have a CAP distribution system up and running, but few, if any, are currently using RSS (or ATOM)."[148]

47. According to NAB, "the Commission should be agnostic about how . . . messages must be [monitored], and merely craft the rules in a way that ensures the monitoring of emergency transmissions provided by federal, state and local emergency operations managers, in whatever form such transmissions are provided."[149] NAB added, "The rules should be flexible enough to accommodate any technology

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[142] *Id.*

[143] *Id.* (*emphasis and internal footnotes omitted*). *See also* Timm Comments at 2; Sage Comments at 7.

[144] Monroe Comments at 7. AT&T Inc. (AT&T), raised certain network security concerns regarding how RSS 2.0 would be implemented. *See* AT&T Inc., Comments, EB Docket 04-296 (filed July 20, 2011) at 2-4 (AT&T Comments).

[145] Sage Comments at 7. *See also* BWWG Comments at 20 ("The BWWG believes that the Commission must not specify any feed type in Part 11. While ATOM feeds are better than RSS feeds ... some new feed format may be devised next year that is better than ATOM. Knowing that technology is a moving target, the FCC must not hobble improvements by specifying any type of feed in Part 11.").

[146] Sage Comments at 7. *See also* Trilithic Comments at 7 (pointing out that "[u]nidirectional data feeds [like one-way satellite service] can not provide an RSS feed [and, therefore,] if RSS is adopted as a standard, ... the Commission should also adopt, or allow the use of a unidirectional (EG: satellite) based protocol for the dissemination of CAP messages" and observing that "[t]he CAP protocol itself allows for this possibility by identifying the in-line encapsulation of resources (derefURI containing audio, etc without using [I]nternet links)").

[147] Sage Comments at 7.

[148] *Id.* at 8.

[149] NAB Comments at 14. *See also* The National Association of Broadcasters Reply Comments, EB Docket 04-296 (filed Aug. 4, 2011) at 6 (NAB Reply Comments) (urging the Commission "to leave these kinds of implementation details to industry").

changes that may occur in any alert originator's process for distributing CAP EAS messages."[150] NAB similarly argued that "[t]he monitoring of state EAS alerts is a matter best addressed in State EAS Plans"[151] and that a "rule that would specify exactly how an EAS Participant must monitor state and local EAS sources . . . could undermine the effectiveness of . . . existing arrangements [specified in State EAS Plans] and perhaps impede future state-EAS Participant arrangements by unnecessarily dictating overly specific terms."[152]

48. NCTA supported the use of RSS 2.0 for monitoring purposes, but raised questions concerning as to how FEMA would distribute CAP messages, including the Internet access methods that would be supported, the URL/IP address(es) that would be used, and polling intervals.[153] NCTA stated, "If FEMA decides to distribute IPAWS federal CAP-formatted messages using multiple distribution methods, EAS participants should only be required to monitor one, not all methods, for federal CAP-formatted messages in order to meet their monitoring obligation."[154] NCTA also supported establishing the same baseline monitoring requirement for gubernatorial CAP messages that apply to federal CAP messages.[155] In this regard, NCTA stated that "despite the Commission's intent that EAS participants [should] not be required to deploy multiple variations of EAS equipment to meet their basic CAP-related obligations, this is exactly the situation EAS participants find themselves in today."[156]

49. Some commenters generally supported the monitoring approach set forth in the *Third FNPRM*. Google Inc. (Google) noted, "While it is not necessary to mandate that all EAS participants utilize the same monitoring system, the FCC should ensure that, at a minimum, all CAP alerts (state and federal) are published via publicly available, Internet-accessible ATOM or RSS feeds."[157] Google also maintained that "it is vital that the distribution of alerts include authentication through digital signatures or secure transmission via HTTPS."[158] Trilithic generally indicated support for "the standardization of transport protocols, and for IP based CAP we prefer RSS," although it also pointed out that RSS cannot be used for unidirectional CAP-formatted alerts, such as those that would be delivered by satellite.[159]

50. *Decision*. We are persuaded by the majority of commenters that it is unrealistic to require that EAS Participants adhere to a specific technical standard for CAP monitoring. The technical parameters of the IPAWS system are still evolving – and the digital world in which that system operates is evolving faster still. Trying to keep up with these changes while specifying the technical requirements

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[150] NAB Comments at 14.

[151] *Id.*

[152] *Id.* at 15.

[153] NCTA Comments at 6.

[154] *Id.* at 7.

[155] *Id.* at 8.

[156] *Id.* NCTA further stated, "Our understanding is that many states have already deployed proprietary CAP-based networks such as EMNet and MyState Net. Consequently, cable operators are faced with purchasing upgrades to existing EAS equipment, and in some cases, purchasing new EAS equipment to accommodate varying existing and planned state proprietary systems." *Id.*

[157] Google Inc. (Google), Reply Comments, EB Docket 04-296 (filed Aug. 4, 2011) at 4 (Google Reply Comments). Google more specifically suggested using a "subscription/push system (such as [Google's] PubSubHubbub)." *Id.* at 5.

[158] *Id.* at 5.

[159] Trilithic Comments at 7.

for federal CAP monitoring in the Part 11 rules is neither practical nor administratively efficient. The fact that FEMA changed the methodology for distributing CAP messages from its IPAWS system to the EAS from RSS 2.0 to ATOM shortly after our adoption of the *Third FNPRM* bolsters this conclusion. While we agree with commenters generally that we should not over-specify the technical requirements for CAP monitoring (or any other aspect of the EAS), we believe that the monitoring obligation requires a level of specificity sufficient to establish clear and enforceable parameters. Fundamentally, the monitoring obligation needs to be specific enough to ensure that EAS Participants have a sufficiently clear understanding of how they are to comply with their obligation to monitor IPAWS for CAP-based alerts, yet is general enough not to require adherence to a particular interface methodology that FEMA may change as development of IPAWS evolves. Accordingly, we are amending section 11.52 of our rules to include a requirement that EAS Participants' EAS equipment must interface with and monitor (whether through "pull" interface technologies, such as RSS and ATOM, or "push" interface technologies, such as instant messaging and e-mail) the IPAWS system to enable distribution of federal CAP-formatted alert messages from IPAWS to the EAS Participants' EAS equipment.

51. We find that the flexible approach to monitoring we adopt here will benefit equipment manufacturers by allowing them to update their equipment designs as federal CAP message delivery mechanisms and technology evolve. This approach will also be efficient from an administrative standpoint, as the Commission will not have to initiate a rulemaking proceeding to implement new monitoring requirements to match any new standard that might develop. Finally, this approach will not impose extra costs on EAS Participants because they will not need to replace EAS equipment if the monitoring requirements change; instead, as Monroe suggests, they can easily update their monitoring sources via software updates.[160]

52. With respect to the monitoring requirement for gubernatorial CAP messages, as indicated above, we proposed in the *Third FNPRM* that such monitoring requirements should mirror federal CAP monitoring requirements.[161] For the reasons explained below (in section IV.D of this order), however, we are eliminating the obligation to receive and process gubernatorial CAP-formatted messages. Absent this obligation, there is no reason to establish a generally applicable requirement for state CAP message monitoring. As a result, the monitoring requirements associated with CAP messages initiated via state (and local) EAS systems will be determined just as the monitoring requirements for SAME-based EAS message transmissions always have been. Specifically, state (and local) alerting authorities, working with EAS Participants, will develop state (and local) CAP alert monitoring requirements and set these forth in their State EAS Plans, to be submitted to and approved by the Commission.

53. We recognize, as NCTA suggested, that states may have adopted different methodologies for distributing CAP alert messages over their EAS systems and that as a result, EAS Participants providing services in multiple states may have some variation in their EAS equipment configurations to directly interface with each state system.[162] However, Monroe indicated that EAS CAP-enabled equipment designs are sufficiently adaptable that they may be reconfigured (typically via software changes) to accommodate multiple distribution technologies with minimal disruption and effort.[163] We also observe that states should be able to distribute their alert messages through the IPAWS system, which EAS Participants will be uniformly monitoring, so there should be a mechanism available for states to distribute CAP-formatted alerts to in-state EAS Participant stations. Accordingly, we conclude that

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[160] *See* Monroe Comments at 6-9; Monroe Reply Comments at 5-6.

[161] *See Third FNPRM*, 26 FCC Rcd 8149, 8168-69, para. 40.

[162] *See* NCTA Comments at 8. *See also* NAB Comments at 15; Google Reply Comments at 4; Sage Comments at 8.

[163] *See* Monroe Comments at 8-7; Monroe Reply Comments at 5-6.

EAS Participants voluntarily electing to meet the monitoring requirements associated with a given state's CAP system specifications are unlikely to incur additional costs in meeting such requirements and that any costs incurred will likely be only minimal.

3. Next Generation Distribution Systems

54. In the *Second Report and Order*, the Commission concluded that it should enhance the distribution architecture of the existing EAS.[164] The Commission indicated that, based on the record before it, it could improve the EAS by authorizing the delivery of alerts through the existing EAS coupled with new redundant distribution systems for EAS.[165] The Commission concluded, however, that FEMA is best positioned to determine the types of additional EAS systems that EAS Participants should accommodate.[166] Accordingly, the Commission stated that "should FEMA announce technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery."[167] The Commission incorporated this obligation into section 11.56, adopting the following text: "all EAS Participants must be able to receive CAP-formatted EAS alerts ... after FEMA publishes the technical standards and requirements for such FEMA transmissions."[168]

55. In the *Third FNPRM*, we interpreted the language from the *Second Report and Order* regarding receipt of CAP-formatted messages from Next Generation EAS delivery systems as being intended to put EAS Participants on notice that, should FEMA adopt technical standards covering delivery of CAP-formatted messages to EAS Participants over specific platforms, such as satellite systems, EAS Participants would ultimately need to configure their systems to be able to interface with such systems to meet their existing obligation to process CAP-formatted messages.[169] We observed that the need to specify such technical standards may never arise.[170] As we interpreted it, the Commission's intent was not to permit FEMA to create or modify existing requirements via publication or adoption of a particular technical standard but rather to permit initiation and carriage of CAP-based alert messages over the existing EAS until a Next Generation EAS might be developed.[171] In this regard, we indicated that whatever obligations might arise with respect to the Next Generation EAS would be addressed in future proceedings.[172] We sought comment on whether further clarification of the EAS Participants' obligation to receive and process CAP-formatted EAS messages delivered over Next Generation EAS distribution systems is necessary.[173]

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[164] *See Second Report and Order*, 22 FCC Rcd 13275, 13291, para. 32.

[165] *See id.*

[166] *See id.*

[167] *Id.*

[168] *See Second Report and Order*, 22 FCC Rcd 13275, 13321, Appendix C. The *Fourth Report and Order* subsequently revised section 11.56 to currently read: "All EAS Participants must be able to receive CAP–formatted EAS alerts as required by this part no later than June 30, 2012." *Fourth Report and Order*, 26 FCC Rcd 13710, 13722, Appendix.

[169] *See Third FNPRM*, 26 FCC Rcd 8149, 8170, para. 44.

[170] *See id.*

[171] *See id.*

[172] *See id.*

[173] *See id.*

56. Two commenters addressed this issue directly. Trilithic asserted, "We do not understand how the Commission can expect EAS Participants to be able to receive messages from FEMA, and also expect FEMA to publish standards and requirements for a new message and delivery mechanism, without also expecting that these FEMA standards and requirements will modify existing requirements."[174] Trilithic argued, "Since 'carriage of a CAP-based alert over the existing EAS' is not possible, the general understanding of the Commission[']s rules seems to have been that a new messaging standard would be designed and implemented by FEMA, and that EAS participants were required to do whatever was necessary to process messages according to the new standards."[175] Trilithic also stated, "'Next Generation EAS distribution systems' is not clearly defined, though presumably it is a reference to digital data systems."[176] BWWG suggested that "the Commission leave itself room in Part 11 for completion of a fully fleshed-out Next Generation EAS strategy that is itself rooted in a national warning strategy that will require more work by FEMA and the stakeholder community."[177]

57. Decision. We believe that our interpretation of the language from the *Second Report and Order* regarding receipt of CAP-formatted messages from Next Generation EAS delivery systems is accurate. When the Commission adopted its CAP-related obligations in the *Second Report and Order*, it understood that FEMA intended ultimately to utilize CAP as its primary alert message format. Subsequently, FEMA indicated that it would distribute these CAP messages via IPAWS. It remains unclear, however, what other future distribution platforms and mediums FEMA might establish to distribute alerts to EAS Participants and whether and how the EAS itself might need to be reconfigured to be more agile and more fully integrated with whatever national alert aggregation concept FEMA may develop with IPAWS. Accordingly, as the *Third FNPRM* indicated, the Commission's mandate that EAS Participants would need to configure their networks to receive CAP-formatted alerts delivered pursuant to any new alert delivery system within 180 days of FEMA's "announc[ing] technical standards for any Next Generation EAS alert delivery system" was intended to put EAS Participants on notice that they ultimately would be required, under rules adopted by the Commission, to configure their systems to be able to interface with any new systems or methods for distributing CAP-formatted messages that FEMA might adopt.[178] By requiring that EAS Participants configure their systems to interface with IPAWS, we also adopt an approach that will impose minimal costs on EAS Participants, because we do not require EAS Participants to assume any obligations inconsistent with our previously required adherence to the CAP standard.

58. With respect to Trilithic's comments on this issue, we have no expectations as to how or whether FEMA may adopt standards and requirements for new message and delivery mechanisms that would modify existing requirements.[179] We merely clarify that: (i) any such standards or requirements cannot be enforced with respect to EAS Participants until the requirements are formally integrated into the Part 11 rules via the rulemaking process, and (ii) we would seek to initiate such a rulemaking process

[174] Trilithic Comments at 7.

[175] *Id.*

[176] *Id.* Trilithic contended, "The meaning of this phrase is likely different for any two parties, however it seems clear to us that a CAP system can only be considered to be 'Next Generation'. The ability to send messages over digital networks, that these messages can contain and convey a great deal more information than the current SAME based EAS, that the content of these messages are not limited by protocol and therefore can grow over time, and that the messages and delivery networks can be adapted to virtually any information distribution system, can not be considered to be the same old EAS system." *Id.* at 2.

[177] BWWG Comments at 22.

[178] *See Third FNPRM*, 26 FCC Rcd 8149, 8170, para. 44.

[179] Trilithic Comments at 7.

in a timely manner, with the goal of making compliance with such standards or requirements effective within 180 days of their formal adoption. As for Trilithic's request for a definition of what constitutes the Next Generation EAS distribution system, the Commission would properly develop that definition in a separate proceeding.

4. Equipment Requirements

59. *Intermediary Devices.* In the *Third FNPRM*, we explained that various parties had suggested that EAS Participants should be allowed to meet their obligation to receive and process CAP messages by deploying intermediary devices.[180] These devices would carry out the function of receiving and decoding a CAP-formatted message and converting the message into a SAME-compliant message that would be inputted into a legacy EAS device for broadcast over the EAS Participant's transmission platform.[181] We indicated that use of such an intermediary device might provide a cost-effective method for an EAS Participant to meet its obligations to receive and convert CAP-formatted messages into the SAME format without having to replace its existing EAS equipment and sought comment on whether we should permit EAS Participants to meet their CAP-related obligations by deploying such intermediary devices.[182]

60. We further sought comment on whether we should subject intermediary devices to some or all of the requirements of sections 11.32, 11.33, 11.51, and 11.52 of the Commission's rules.[183] We also sought comment on whether intermediary devices can be modified via software or firmware to accommodate future changes to CAP, the SAME protocol, or changes to other Part 11 requirements and whether intermediary devices provide a cost-effective and efficient method for EAS Participants to meet the CAP-related obligations.[184] We asked whether EAS Participants deploying intermediary devices would likely have to replace such devices with new CAP-compliant equipment sooner than EAS Participants that deployed new CAP-compliant equipment to begin with and what, if any, approximate cost savings would result from deploying an intermediary device instead of replacing legacy EAS equipment with new CAP-compliant EAS equipment.[185]

61. Several commenters addressed these issues. Most indicated outright or conditional support for the use of intermediary devices. NAB, for example, supported the use of intermediary devices "as a cost-effective option that will fully satisfy an EAS Participant's CAP obligations."[186] NAB asserted that "broadcasters take pride in their unique role as the backbone of EAS, but the federal obligation to upgrade one's EAS equipment to a CAP-based system is nevertheless an additional financial challenge that arrives during difficult economic circumstances."[187] In this regard, NAB observed that "[f]or certain smaller broadcast stations, and stations in small or rural markets with less financial resources, intermediary devices are particularly useful alternatives."[188] NAB also observed, "As a practical matter, many

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[180] *See Third FNPRM*, 26 FCC Rcd 8149, 8171, para. 45.

[181] *See id.*

[182] *See id.*, paras. 45-46.

[183] *See id.*, para. 46.

[184] *See id.* at 8171-72, para. 47.

[185] *See id.*

[186] NAB Comments at 17.

[187] *Id.*

[188] *Id.*

broadcasters have already purchased intermediary equipment and it is deployed in the field."[189] NAB urged the Commission "not to adopt overly restrictive encoder and decoder rules for intermediary devices" but instead to "adopt global regulations to specify that intermediary devices are ECIG compliant, enable EAS Participants to satisfy their obligations to accept and decode a CAP-formatted EAS message and can translate and encode that message into the SAME-format for retransmission via the existing EAS path."[190]

62. The Association of Public Television Stations and the Public Broadcasting Service (collectively, "Public Television") urged the Commission "to allow EAS participants to meet their CAP-related obligations through the use of intermediary devices."[191] Public Television argued, "These devices provide a straightforward, effective, and cost-efficient means of adding CAP capabilities to already-compliant EAS installations."[192] Public Television estimated that "nearly half of our member stations have already purchased equipment in response to the Commission's earlier proceedings and deadlines"[193] and that "the vast majority of those have purchased intermediary devices."[194] Public Television continued, "Any changes to CAP-related obligations that would prohibit or restrict the use of such devices would create a burden and detriment to public television stations throughout the nation that have worked diligently to comply and serve their communities when EAS is utilized."[195]

63. The Prometheus Radio Project ("Prometheus") similarly supported allowing EAS Participants to meet their CAP-related obligations using intermediary devices, observing that "[i]ntermediary devices are currently available at prices substantially lower than the cost of all-in-one CAP-compliant units, representing a significant savings to participants."[196] Prometheus also observed that "EAS encoders and decoders are among the most durable equipment used in broadcast studios, and requiring participants to replace them prematurely would waste money, labor, and materials."[197] NCTA agreed, noting that "depending on the legacy EAS equipment in place, deployment of intermediary devices may be a cost-effective method for an EAS Participant to meet its obligation to receive and convert CAP-formatted messages into the SAME format without having to replace its existing EAS equipment."[198] Verizon also supported allowing EAS Participants to meet their CAP-related obligations using intermediary devices, observing that "[f]oreclosing this option would not only result in unnecessary new expense for providers, but also would likely result in additional delay before CAP could be implemented, given the time required to order, install, configure, and test new equipment."[199]

64. EAS equipment manufacturer TFT also supported the use of intermediary devices, arguing that "[i]f intermediary devices are not permitted, EAS Participants would need to replace their entire

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[189] *Id.* at 18.

[190] *Id.*

[191] Public Television Comments at 2.

[192] *Id.* at 4.

[193] *Id.* at 3-4.

[194] *Id.* at 4.

[195] *Id.*

[196] The Prometheus Radio Project Comments, EB Docket 04-296 (filed July 20, 2011) at 1 (Prometheus Comments).

[197] *Id.* at 2.

[198] NCTA Comments at 10-11.

[199] Verizon Comments at 4.